

REMARKS

A petition for a one month extension of time has today been filed as a separate paper.

A "Substitute Specification and Abstract" is submitted herewith for placing the case in somewhat better English form. The "Substitute Specification and Abstract" contains no new matter. In order that the examiner can verify lack of new matter, also submitted herewith is a marked up copy of the original specification and abstract, from which the "Substitute Specification and Abstract" was typed.

New claim 9 roughly corresponds to original claim 4, rewritten in independent form, with additional amendments. The optical fibers of the present invention are described as single mode fibers in paragraphs [0025], [0026] and [0029]. That the large-diameter optical fiber has a core diameter suitable for an optical fiber network is taught, for example, in paragraph [0034]. New claims 10 and 11 correspond, respectively, to original claims 2 and 3. Regarding new claims 12 and 13, see paragraph [0030] and Figs. 2(A)-2(C). New claim 14 corresponds to original claim 5 with addition of language referring to arranging within a ferrule and defining the optical fibers as single mode (SM) optical fibers. New claims 15-17 correspond, respectively, to original claims 6-8. New claim 18

finds corresponding description in paragraph [0032]. New claim 19 finds corresponding description in paragraphs [0028] and [0034]. Finally, new claim 20 recites a feature shown in Figs. 2(A)-2(C) of the drawings.

The rejection of the original claims for anticipation by Hmelar et al is believed to be moot in view of the wording of the new claims. The invention of Hmelar et al is directed to optical fibers used "to deliver optical energy to targeted tissue within a patient," quoting from column 1, lines 8-10. More specifically, the Hmelar et al invention relates to a laser system used in medical applications. See column 1, lines 13-15 and column 2. In contradistinction, the present invention relates to splicing into an optical fiber communication network and to a splice in such a network. See paragraphs [0028] and [0034]. Thus, the Hmelar et al optical fiber can transmit the 60-80 Watts of power output by a holmium laser system (column 2, lines 16-19), whereas input of that amount of power to optical fiber used in a communication system, or to the component of the present invention would destroy the optical fiber. Conversely, the multi-mode fibers of Hmelar cannot be used in an optical fiber communication network.

It necessarily follows that the optical fiber components/splices of the present invention differ from those used by Hmelar et al in laser medical applications. One such difference is that the optical fibers of Hmelar et al are multi-mode, as is apparent from a reading of , for example, column 5, lines 60-62 and column 6, lines 3-5, of Hmelar et al, whereas the fibers of the present

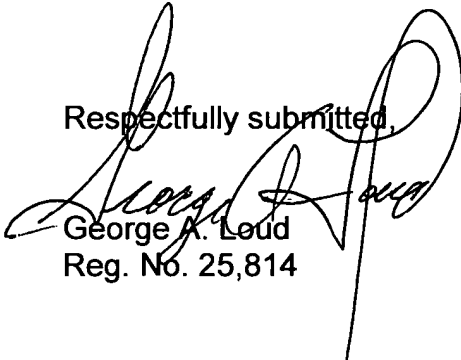
invention are single mode. Further, the spot size transition portion (tapered section) of the present invention will necessarily differ from that of Hmelar et al because of differences between the methods by which they are produced as described below.

Regarding the method claims (now claims 14-20), note that in Hmelar et al the cores of fibers 18 and 20 are not expanded. The core of fiber 18 is narrowed by pulling as described at column 4, lines 40-60. After one end of fiber 18 is drawn down to a diameter matching that of fiber 20, the ends of fibers 18 and 20 are abutted against each other and fused together as described at column 5, lines 2-27 of Hmelar et al. Hmelar et al nowhere describe or suggest expansion of any core by diffusion of a dopant or otherwise.

In conclusion, it is respectfully requested that the examiner reconsider the rejection with a view toward allowance of the reworded claims.

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Respectfully submitted,


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